REMARKS

The Office Action dated August 3, 2004 has been received and carefully studied.

A certified copy of the priority document is submitted herewith.

The Examiner rejects claim 1 under 35 U.S.C. §102(b) as being anticipated by Andersson, U.S. Patent No. 6,545,749. The Examiner states that Anderson teaches a light wave distance measuring system having all of the limitations of claim 1. The Examiner also rejects claim 2 under 35 U.S.C. §103(a) a being unpatentable over Andersson. The Examiner admits that Andersson does not teach an aperture in the light receiving lens 21, but considers the same to be the equivalent to the system used in Andersson and therefore obvious.

The Examiner also rejects claims 3-7 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, as obvious over, Andersson, and claim 8 as being unpatentable over Andersson in view of Nakamura, U.S. Patent No. 4,843,228. The Examiner states that Andersson teaches that different shapes of a multi-focal lens 22 can be used and are all functionally equivalent. Nakamura is cited for its disclosure that the optical axis used for the transmitted light in a distance measurement system which uses the same objective lens for transmitting measurement light as well as receiving reflected light may be offset from the center of the objective lens.

By the accompanying amendment, claim 1 has been amended to recite that the perforated optical member has an aperture that transmits the reflection light converged by the light receiving lens in the case of long distance measurement, and has multiple focal points for converging the reflection light to the light receiving surface corresponding to a

range of near distance in the case of near distance measurement. Support for the amendment can be found at pages7-9 in and Figures 1 and 2, for example.

In the present invention as claimed, in distance measurement that is not at a near distance, i.e., in the case where a reflection light has a parallel luminous flux or an approximately parallel luminous flux, a light receiving lens 9 converges a reflection light to a light receiving end surface 12. In this case, a perforated optical member 11 does not obstruct the conversion (see Figure 1). Accordingly, the reflection light converged by the light receiving lens 9 is in an amount sufficient for distance measurement.

In distance measurement at a near distance, the reflection light does not have a parallel luminous flux. Accordingly, it is impossible for the light receiving lens 9 to converge the reflection light to the light receiving end surface 12. Under this condition, the perforated optical member 11 converges the light in the peripheral portion of the reflection light to the light receiving end surface 12.

Thus, in the present invention, it is possible to perform distance measurement from a long distance to a near distance.

In contrast, Andersson discloses in Figure 4 an objective lens 21 and a ring-shaped optical member 22. In the case where a reflection light has a parallel luminous flux, the reflection light ins converged by the objective lens 21 to a detector unit 20. In the case where the reflection light does not have a parallel luminous flux, the reflection light is converged to the detector unit 20 through converging action by both the optical element 22 and the objective lens 21.

In addition, the optical member 2 is arranged on an opposite side of the detector unit 20 from the objective lens 21. In this respect, in the case of distance measurement at

long distances, i.e., in the case where the reflection light enters in parallel luminous flux, the optical element 22 obstructs the reflection light, and the light amount received at the detector unit 20 decreases. In distance measurement at long distances, the reflection light is poor. Accordingly, in order to obtain sufficient light amount of the reflection light, it is necessary to increase the diameter of the objective lens 21.

Also, in Andersson, there is no disclosure or suggest that the optical element 22 has two or more focal points. Therefore, it is impossible to effectively converge the reflection light to the detector unit 20 corresponding to a range of near distance in distance measurement at near distances.

Further, both in a first embodiment shown in Figures 1 and 2 and in a second embodiment shown in Figure 3 of Andersson, in order to converge the reflection light to the light receiving surface, a driving mechanism for moving the optical element is necessary.

The remaining prior art is believed to have been properly not relied upon in rejecting any claim.

Reconsideration and allowance are respectfully requested in view of the foregoing.

Respectfully submitted,

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